APPENDIX

APPENDIX

FEATURED IN THIS SECTION

Appendix: IT Plan Standards
(February 2005)

Fairfax County IT Standards	
DESKTOP, LAPTOP:	
Operating System	Windows XP
DESKTOP APPLICATIONS:	
Word Processor	Microsoft Word 2003
Spreadsheet	Microsoft Excel 2003
Presentation	Microsoft PowerPoint 2003
Database	Microsoft Access 2003
E-Mail Client	Microsoft Outlook 2003 / Outlook Web Access (latest release)
Project Management	Microsoft Project Professional 2003
Graphics	Microsoft Visio Professional 2003
SPECIALTY APPLICATIONS:	
Web Browser	Microsoft Internet Explorer (latest release)
Antivirus	Symantec AntiVirus (latest release) for Workstations and Servers
Mainframe 3270 Emulation Software	??????
GIS	Arc/Info 8.3 ArcView 3.3 ArcView 8.3 ERDAS 8.6 Map Objects 2.1 ARC Internet Map Server 4.1 ArcSDE 8.3
SERVERS:	
Operating System	Microsoft Windows Server 2003 Standard Edition Microsoft Windows Server 2003 Enterprise Server (clustering or servers with 4 processors or more) Solaris (latest release) z/OS 1.4
Thin Client Access	Citrix MetaFrame XPe
Hardware	Intel (Windows) SUN(UNIX) IBM S390(Mainframe)
Backup	Tivoli Storage Manager 5.1 z/OS DFSMS
Storage	SAN
E-Mail	Microsoft Exchange Serer 2003 Enterprise Edition Lsoft ListServ
Web Application Servers	Microsoft Internet Information Server (latest release) Apache Web server (if JAVA based web server required by COTS package) .NET Framework Active Server Pages / ASP.NET (latest release)
Database	Oracle 9 or higher DB2 Release 7 Microsoft SQL Server 2000
Communications Protocol	TCP/IP

Appendix: IT Plan Standards

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CHART A: PLATFORM ARCHITECTURE STANDARDS:
END USER HARDWARE

COMPONENT	DESKTOPS	DESKTOPS/ HIGH END USERS	LAPTOPS	LAPTOPS/HIGH END USERS
POWER	Single	Single	Single	Single
CPU	Pentium IV 2.66 GHz	Pentium IV 3.0 GHz 800 FSB	Pentium IV 1.6 GHz	Pentium IV 1.7 GHz
DISK CONFIGURATION	40 GB Hard Drive, 3.5 Floppy , 48X DVD CD-RW Combo Drive	80 GB Hard Drive, 3.5 Floppy , 48X DVD CD-RW Combo Drive	60 GB Hard Drive, DVD-CDRW Combo Drive	60 GB Hard Drive, DVD-CDRW Combo Drive
RAM	512MB 2 DIMMS, expandable	1 GB 2 DIMMS, expandable	512MB	1 GB 2 DIMMS
MONITOR	17" SVGA, Ultra Sharp, Flat Panel	17" SVGA, Ultra Sharp, Flat Panel	Active/Passive Matrix (dependent on laptop resident applications)	Active/Passive Matrix (dependent on laptop resident applications)
INTERFACE CARD(S)	Ethernet 10/100/1000 Base-T	Ethernet 10/100/1000 Base- T	Built-in ethernet card	Built-in ethernet card
OPERATING SYSTEM	Windows XP	Windows XP	Windows XP	Windows XP
FILE SYSTEM	NTFS	NTFS	NTFS	NTFS
MAINTENANCE	3 Year on-site, next business day	3 Year on-site, next business day	3 Year on-site, next business day	3 Year on-site, next business day
ADDITIONAL HARDWARE REQUIREMENTS	UL Approved Surge Processor (new) Sound Card, 2 USB Ports	UL Approved Surge Processor (new) Sound Card, 2 USB Ports	UL Approved Surge Processor (new) Back-up Battery Docking Station (if used as desktop) Security Lock	UL Approved Surge Processor (new) Back-up Battery Docking Station (if used as desktop) Security Lock
MAINFRAME 3270 EMULATION	Jacada web-based 3270 emulation	Jacada web-based 3270 emulation	Jacada web-based 3270 emulation	Jacada web-based 3270 emulation
THIRD PARTY SOFTWARE	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest version) MS Office Suite XP MS Outlook MS SMS Client	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest version) MS Office Suite XP MS Outlook MS SMS Client	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest version) MS Office Suite XP MS Outlook MS SMS Client	Symantec Anti Virus, Enterprise Edition Microsoft Internet Explorer (latest version) MS Office Suite XP MS Outlook MS SMS Client
PRE-INSTALL OPTIONS	All components (hardware) installed	All components (hardware) installed	All components (hardware) installed	All components (hardware) installed
PREFERRED MANUFACTURER	Dell	Dell	Dell	Dell
OPTIONAL (AS REQUIRED FOR BUSINESS NEEDS)	Speakers Head phones Additional memory Additional hard drive	Speakers Head phones Additional memory Additional hard drive	Speakers Head phones Additional memory Additional hard drive	Speakers Head phones Additional memory Additional hard drive

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CHART A: PLATFORM ARCHITECTURE STANDARDS:
HAND HELD MOBILE DEVICES

COMPONENT	
PLATFORM	Blackberry
SOFTWARE COMPATIBLITY	Outlook Exchange (Downloadable), Active Sync, Date Book, Address Book, To do List, Memo Pad, Calculator
CONNECTIVITY	TCP/IP Internet or USB enabled

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CHART B: PLATFORM ARCHITECTURE STANDARDS:
FILE / PRINT / WEB SERVICES

COMPONENT	FILE / PRINT SERVERS	WEB SERVERS (INTEL)	WEB SERVERS (UNIX)
TYPE	INTEL	INTEL	UNIX
POWER	Redundant, UPS required if not EOC-resident	Redundant, UPS required if not EOC-resident	Redundant, UPS required if not EOC-resident
FAULT TOLERANCE / DISK CONFIGURATON	Operating System Drives - Raid 1 (Mirrored) Database / Application Drives - Raid 5 utilizing SAN if EOC resident	Operating System Drives - Raid 1 (Mirrored) Database / Application Drives - Raid 5 utilizing SAN if EOC resident	Operating System Drives - Raid 1 (Mirrored) Database / Application Drives - Raid 5 utilizing SAN if EOC resident
CPU	Dual 3.0 MHz	Dual 3.0 MHz	Dual 1.5 GHz
NETWORK INTERFACE CARDS	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T
OPERATION SYSTEM(S)	Windows 2003 Server	Windows 2003 Server	Solaris (latest release)
MONITOR	17" SVGA Color, if non-EOC site Not required if EOC resident	17" SVGA Color, if non-EOC site Not required if EOC resident	Rack mountable Flat LCD monitor Required if EOC resident
RAM	4 GB Minimum Cache 256MB	4 GB Minimum Cache - Database/Application specific	8 GB Minimum Cache - Database/Application specific
FILE SYSTEMS	NTFS	NTFS	Solaris
THIRD PARTY SOFTWARE REQUIREMENTS	Symantec Antivirus, Enterprise Edition MS SMS Client	Symantec Antivirus, Enterprise Edition MS SMS Client Netegrity SiteMinder Agent Internet Information Server (latest edition) or Apache Web Server if JAVA based web server required by COTS package	Symantec Antivirus, Enterprise Edition Netegrity SiteMinder Agent Internet Information Server (latest edition) or Apache Web Server if JAVA based web server required by COTS package
PLATFORM	Dell	Dell	Sun
MAINTENANCE	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included
ADDITIONAL HARDWARE REQUIREMENTS	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 2 Open Slots to facilitate system expansion Dual HBAs (if connected to SAN); DVD-ROM & Tape Drive (DDS-4
PRE-INSTALL OPTIONS	None	None	None
STORAGE AND BACKUP HARDWARE / SOFTWARE	Tivoli Storage Manager Enterprise Backup Client	Tivoli Storage Manager Enterprise Backup Client	Tivoli Storage Manager Enterprise Backup Client Veritas Volume Manager (if connected to SAN)

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CHART C: PLATFORM ARCHITECTURE STANDARDS:
DATABASE / APPLICATION SERVERS

| COMPONENT	DATABASE SERVERS (INTEL)	DATABASE SERVERS (UNIX)	APPLICATION SERVERS (INTEL)	APPLICATION SERVERS (UNIX)
TYPE	INTEL	UNIX	INTEL	UNIX
POWER	Redundant, UPS required if not EOC-resident	Redundant, UPS required if not EOC-resident	Redundant, UPS required if not EOC-resident	Redundant, UPS required if not EOC-resident
FAULT TOLERANCE / DISK CONFIGURATON	Operating System Drives - Raid 1 (Mirrored) Database / Application Drives - Raid 5 (utilizing SAN if EOC resident)	Operating System Drives - Raid 1 (Mirrored) Database /Application Drives - Raid 5 (utilizing SAN if EOC resident)	Operating System Drives - Raid 1 (Mirrored) Database / Application Drives - Raid 5 (utilizing SAN if EOC resident)	Operating System Drives - Raid 1 (Mirrored) Database / Application Drives - Raid 5 (utilizing SAN if EOC resident)
CPU	Quad 3.0 Mhz	Quad 3.0 Mhz	Quad 3.0 Mhz	Quad 3.0 Mhz
NETWORK INTERFACE CARDS	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T	Dual Ethernet 1000 Base-T
OPERATION SYSTEM(S)	Windows 2003 Server Windows 2003 Advanced Server (Clustering)	Solaris (latest release)	Windows 2003 Server Windows 2003 Advanced Server (Clustering)	Solaris (latest release)
MONITOR	17" SVGA Color, if non-EOC site Not required if EOC resident	Rack Mountable LCD Flat monitor Required if EOC resident	17" SVGA Color, if non-EOC site Not required if EOC resident	Rack Mountable LCD Flat monitor Required if EOC resident
RAM	8.0 GB Minimum Cache - Database/Application specific	8.0 GB Minimum Cache - Database/Application specific	4.0 GB Minimum Cache - Database/Application specific	4.0 GB Minimum Cache - Database/Application specific
FILE SYSTEMS	NTFS	Solaris	NTFS	Solaris
THIRD PARTY SOFTWARE REQUIREMENTS	Symantec Antivirus, Enterprise Edition MS SMS Client	Symantec Antivirus, Enterprise Edition	Symantec Antivirus, Enterprise Edition MS SMS Client	Symantec Antivirus, Enterprise Edition
PREFERRED MANUFACTURER	DELL	SUN	DELL	SUN
MAINTENANCE	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included	3 Year, 24/7, 4 hour on-site, parts & labor included
ADDITIONAL HARDWARE REQUIREMENTS	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Internal Tape Drive for Root Volume Backup Minimum 2 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Rack mountable rails if EOC resident Minimum 3 Open Slots to facilitate system expansion HBAs (if connected to SAN)	Raid Controller Internal Tape Drive for Root Volume Backup Minimum 2 Open Slots to facilitate system expansion Dual HBAs (if connected to SAN); DVD-ROM, Tape Drive(DDS-4)
STORAGE AND BACKUP HARDWARE / SOFTWARE	Tivoli Storage Manager Enterprise Backup Client TDP for Oracle or SQL server	Tivoli Storage Manager Enterprise Backup Client TDP for Oracle or SQL server	Tivoli Storage Manager Enterprise Backup Client	Tivoli Storage Manager Enterprise Backup Client

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CHART D: DATABASE & APPLICATION ARCHITECTURE STANDARDS:
SERVERS

COMPONENT	MAINFRAME	UNIX	INTEL	INTERNET / INTRANET	GIS
DATABASE SOFTWARE	DB2	Oracle 9i	SQL Server (latest release)	N/A	Oracle 9i
APPLICATION SOFTWARE	N/A	.NET Framework	.NET Framework	Index Server (w/ PDF I-filter) [or Verity K2E], .NET Framework,	N/A
SOFTWARE / DEVELOPMENT TOOLS	COBOL, CICS, TSO, JCL	Visual Studio.Net	Visual Studio.Net	Homesite, Visual Studio.NET 2003 or higher, Dreamweaver	Arc/Info 8.3 ArcView 3.3 Map Objects 2.1 Arc Internet Map Server 4.1 ArcSDE 8.3, Visual Studio 6.0 Visual Studio .NET .NET Framework Dreamweaver ASP
SECURITY SOFTWARE	RACF	Native operating system	Active Directory	Netegrity SiteMinder	Native operating system
APPLICATION INTEGRATION	web Methods, JACADA	web Methods	web Methods	web Methods, JACADA	N/A
SCHEDULER	CA7	CRON	Scheduler Service	Scheduler Service	CRON
AD HOC REPORT TOOLS	Crystal Reports, Easytrieve Plus	Crystal Reports	Crystal Reports	Crystal Reports	
STATISTICAL ANALYSIS TOOLS	SAS	SAS	SAS	SAS	
WORKSTATION REQUIREMENTS	Jacada web-based 3270 Emulation, TCP/IP Connectivity	Oracle Client Suite, ODBC Drivers	Oracle Client Suite, ODBC Drivers	Microsoft Internet Explorer (latest release)	Terminal Server Client, Citrix Metaframe, Client/Active X Plugin, Active Directory Tools

All applications should be web-browser based and be developed following the n-tier development model to clearly separate presentation (look and feel), from the application (business logic), from the database. N-tier applications have the advantage that any one tier can run on an appropriate processor or operating system platform independently of the other tiers.

Presentation — HTML XML

Application

Database — ODBC JDBC SQL
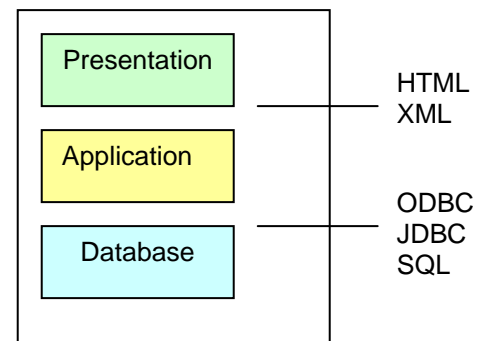
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FAIRFAX COUNTY DATA COMMUNICATIONS STANDARDS

NETWORK INTERFACE CARDS

Mother Board	Primary NIC	Secondary NIC	Laser Printer NIC
Ethernet	3COM	IBM	HP Jet Direct

The exact make and model is determined by the end-station standard.
Secondary NIC is a backup product in case of difficulty with the availability of the Primary NIC or special end-node requirements.
All IP-addressable printers

NETWORK PROTOCOLS

Current	Future
TCP/IP	TCP/IP only
SNA (DLSW)	
OSPF	

CABLING STANDARDS

Structured cabling based on the ANSI/TIA/EIA and ISO standards

A) Horizontal (cabling and pathways):

Current	Future
CAT5/5e UTP and SCTP	CAT6 UTP and SCTP

B) Outlets

Current	Future
Category 5 / 5e Cabling	Category 6 Cabling
Siemens 4 outlet modular faceplates	
Color-coded inserts *(to identify the media being used in each outlet)*	
Voice and data terminated at the same faceplate.	

C) Between Buildings / Backbone

Current	Future
Dependent on Distance	Investigating wireless between buildings and within certain areas of buildings
12 strand "single-mode" OFNP, single mode optical fiber.62.5/125 and 5/125 OFNP multi-mode and single-mode optical fiber.	

FAIRFAX COUNTY DATA COMMUNICATIONS STANDARDS (continued)

NETWORK HARDWARE

    Routing

        Cisco 2600 Family

        Cisco 4500 Family (Layer 3)

        Cisco 6500 Family (MSFC)

    Switching

        Cisco 6500 Family – Core applications (MDF)

        Cisco 4500 Family – Wire Closet (Medium to Large IDF)

        Cisco 2950 Family – Wire Closet (Small to Medium IDF)

Fairfax County Enterprise Network LAN infrastructure is a purely switched environment. The size of the switch used is based on the size of the workforce supported. The fixed chassis switches such as the 2948G, 2950/24, and the 2950/48 are used only in cases were the workforce supported is less than 48 total devices. After that breakpoint a chassis style switch is used. .

    FIREWALLS

        Cisco PIX family

    CONTENT/CACHING ENGINE

        Cisco 7305-K9

    CONTENT SERVICES SWITCHING/LOAD BALANCING

        Cisco CSS-11000 family